(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: 0 441 023 A2

(12) EUROPEAN PATENT APPLICATION

(21) Application number: 90308919.1

(51) Int. Cl.5: A61J 7/04, G09F 3/00

(22) Date of filing: 14.08.90

(30) Priority: 07.02.90 GB 9002727

(43) Date of publication of application:
14.08.91 Bulletin 91/33

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

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(54) Recording means, container, label for the container and method of recording consumption of the contents of the container.

(57) A container (10) suitable for medication has a label bearing an array of readily removable marks (13), the marks being arranged in groups corresponding to days of the week.

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RECORDING MEANS, CONTAINER, LABEL FOR THE CONTAINER AND METHOD OF RECORDING CONSUMPTION OF CONTENTS OF THE CONTAINER

Description of Invention

From one aspect, the present invention relates to a container containing a substance which is to be consumed in a number of portions at prescribed times or in no more than a prescribed number of portions in a predetermined period. The invention is applicable with advantage to containers which contain medicaments.

It is known to provide portions of a medicament in a container which has individual pockets for those portions, for example capsules or pills. It is known to mark the pockets to associate each pocket with a respective day of the week. The user can then readily determine whether he or she has consumed the medicament prescribed for consumption on a particular day. However, these known containers are inappropriate in certain cases. In particular, each example of the known containers is manufactured to contain a predetermined number of portions of the medicament. Prescriptions may require the packing of different numbers of portions of medicament in individual containers.

According to a first aspect of the present invention, there is provided a container for containing a substance to be consumed at prescribed times or otherwise at intervals and a display which is accessible from outside the container, at least when the container is open, wherein the display includes respective removable marks corresponding to said times, to said intervals or corresponding to portions of said substance.

The number of portions of the substance to be provided in the container can be selected at the time the container is charged. The container is suitable for containing various numbers of portions. The number of portions may be smaller than the number of removable marks, in which case some of the marks will be redundant.

The container preferably has a continuous base layer and an interrupted covering layer, these layers being combined in the display, and the covering layer being readily removable from the base layer, one region at a time.

The display of a container according to the first aspect of the invention may be used to record each of several occasions when a portion from the container is consumed, to assist a person to limit the number of portions consumed within a predetermined period and/or to achieve the consumption of portions at prescribed times.

According to a second aspect of the invention, there is provided recording means for use in recording the occurrence of a series of events and comprising a continuous base layer and an interrupted covering layer which is readily removable from the base layer, wherein the covering layer covers only local regions of the base layer and said regions are arranged in a regular array. The array may include a number of groups and the base layer may bear marks which differentiate the groups from each other. Preferably, the marks on the base layer associate the regions of the covering layer with respective times or respective periods, for example hours or days.

The array may include seven groups of said local regions, respective ones of the groups being marked to represent the days of the week.

The recording means may be a label suitable for a container according to the first aspect of the invention. Alternatively, the recording means may be attached to equipment which is to be inspected, serviced or otherwise attended at intervals.

According to a third aspect of the invention, there is provided a method of recording the consumption of portions of a substance, which portions are initially present in a common container, wherein the container is provided with a base layer and an interrupted covering layer which is readily removable, one region at a time, from the base layer and wherein, when each portion is removed from the container for consumption, a respective region of the covering layer is removed from a corresponding region of the base layer, thereby changing the appearance of the container or of the combination of base layer and covering layer.

The base layer is preferably on the container. However, the base layer and the covering layer may alternatively be separable from the container, for example being provided in the form of a separate sheet or card.

An example of a container according to the first aspect of the invention, which incorporates a label embodying the second aspect and which is used in a method according to the third aspect of the invention will now be described, with reference to the accompanying drawing, which shows diagrammatically a perspective view of the container.

The container illustrated in the accompanying drawing comprises a hollow body 10 and a removable lid 11 for closing the body. In the particular example illustrated, the body is of generally cylindrical form and the lid 11 has a diameter which is at least approximately equal to the diameter of the body. The form of the container may differ from that shown in the drawing. For example, the container may have a neck and the lid may fit onto the neck. The body and the lid have respective forma-

tions (not shown) which cooperate to retain the lid releasably on the body. These formations may be screw threads. The body 10 may be formed by a moulding process from glass or from a plastics material. The lid 11 is conveniently formed as a moulding of a plastics material.

The container has a display 12 at the outside of a circumferential wall of the body 10. The display includes a regular, rectangular array 13 of marks which are distinct one from another. In the example illustrated, the marks are spaced from each other. However, it would be within the scope of the invention for the spaces between adjacent marks to be substantially eliminated, provided that the boundaries between adjacent marks are distinct. The marks are respective portions of an interrupted covering layer, each of which covers a corresponding region of an underlying base layer. The base layer may be the wall of the container body 10 but is preferably a separately formed layer which is bonded to the wall of the container 10, for example by means of an adhesive. The base layer and the covering layer may be incorporated in a label which bears a layer of an adhesive on one face of the base layer, that is the face which is remote from the covering layer. Prior to application of the label to the container body 10, the adhesive may be covered by a sheet of material which does not bond strongly to the adhesive.

The base layer conveniently is of rectangular form, having a height which is somewhat less than the height of the peripheral wall of the container body 10 and a length which is somewhat less than the circumference of that wall. Within these dimensions, the base layer is continuous. The covering layer is interrupted by the spaces between adjacent marks. Furthermore, the array of marks occupies a part only of the superficial area of the base layer. A further part of the base layer is available to receive written matter, for example the name of a person for whom contents of the container have been prescribed, instructions concerning doses to be taken and the times at which they are to be taken and a brief description of the contents of the container.

The array 13 of marks comprises seven groups. In the example illustrated, these groups are spaced from one another around the circumference of the container. The base layer bears designations of the groups indicating days of the week which are represented by the groups.

By way of example, there is shown in each group twelve marks. These are divided into three equal sub-groups, namely an upper sub-group, a middle sub-group and a lower sub-group. It will be appreciated that each group may comprise additional sub-groups. Each group comprised by the array 13 is substantially identical with each other group comprised by the array and each sub-group is identical with the other sub-groups.

The upper sub-groups may be distinguished from the middle sub-groups and from the lower sub-groups by colour. The marks themselves may be coloured for this purpose. Alternatively, the spaces between and surrounding the marks of the sub-group may be coloured to distinguish the marks of that sub-group from the marks of an adjacent sub-group.

The regions of the base layer underlying the marks of the array 13 are coloured differently from the marks themselves. The colours of these regions may differ from the colour of the base layer in the spaces between adjacent marks or may be the same as the colour of the base layer in these spaces.

The covering layer which forms the marks of the array 13 is readily detached from the base layer, for example by rubbing with a finger or a finger nail. In this way, the appearance of the display 12 can readily be changed to indicate that a portion of the contents of the container which corresponds to a removed mark has been consumed.

In a case where four portions are to be consumed at respective different times during each day, one mark of the sub-group representing that day is removed when a corresponding portion is consumed. In a case where only one portion is consumed each day, the entire sub-group may be removed when that portion is removed from the container for consumption. Alternatively, the number of marks comprised by a sub-group may be selected to be equal to the number of portions to be consumed each day. When one portion is to be consumed each day, each sub-group may comprise a single mark.

Alternative arrangements of the marks in the array may be used, for example in a case where portions are to be consumed at intervals of one hour or intervals of several hours.

The container may be used for medicaments in the form of capsules or of pills or for a medicament in liquid form. It will be understood that the display 12 may be provided on other surfaces of the container and could be provided at the inside of the lid 11 so that the display is concealed from view and is protected, when the container is closed.

In a case where the container contains or is intended to contain a substance which is not prescribed for consumption at specific times but portions of which may be consumed as and when necessary and it is desirable to limit the number of portions consumed within a predetermined period, the designations which indicate days of the week represented by the groups may be omitted. The number of marks comprised by a group may be

the maximum number of portions which may be consumed within a predetermined period, for example 24 hours. If one mark is removed on each occasion when a portion is consumed, the user will be alerted when this maximum number has been consumed.

The colour exposed when one or a selected number of marks of a group is removed may differ from the colour exposed when a further mark or further number of marks from that group is removed. For example, the first mark or the first several marks may overlie a green coloured part of the base layer so that the appearance at each of these marks changes from, say black to green, when this mark or these marks is or are removed. The second mark or several marks of the group may cover a part of the base layer which is coloured amber or orange so that, when this mark or these marks is or are removed, the colour at the mark changes from black to amber or orange. The last mark or last several marks of the group may cover parts of the base layer coloured red so that removal of this mark or these marks changes the colour at the marks to red, as a warning that consuming a corresponding number of portions will amount to a potentially dangerous dose. The colours are preferably those prescribed for use on safety warning signs in B.S. 5378 and a corresponding EC directive.

The label may be applied to an object other than a container. For example, the label may be applied to equipment which is to be inspected or serviced at intervals. A mark can then be removed on each occasion when the equipment is inspected or serviced. Furthermore, it is not essential for the base layer to be fixed on the equipment. The base layer may be incorporated in portable recording means.

The base layer may be applied to a sub-layer which may be the wall of the container body 10 or a primary label. For example, there may be applied to the wall of a container a primary label which bears indications of the name of the person for whom contents of the container have been prescribed, the dose to be taken and the times at which doses are to be taken and which primary label incorporates a space to receive a secondary label. In this case, the secondary label may be smaller than the primary label and incorporate the display 12.

Whilst it is preferred that the display 12 is borne by the container, this may be inappropriate in certain circumstances. For example, in a case where the container is small and the display is to be used by a person who has difficulty carrying out manual operations precisely or difficulty seeing small marks, the display 12 may be provided on a sheet which is supplied with but with which can be separated physically from the container. The label is as large as or larger than the container, larger than a label on the container and more easily read than the label on the container. In this case, the sheet preferably also bears indications of the name of the person for whom the contents of the container have been prescribed, the dose and the times at which the dose is to be consumed.

Alternatively, in a case where a small container contains a large number of doses, a plurality of labels, each bearing a display corresponding to the display 12, may be provided on the container, these labels being superimposed one on the other as each label is used so that, when the marks of the first label have been removed, this label can be covered by the second label.

The features disclosed in the foregoing description, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Claims

1. A container containing a substance to be consumed at prescribed times or otherwise at intervals and a display which is accessible from outside the container, at least when the container is open, wherein the display includes respective removable marks corresponding to said times, to said intervals or corresponding to portions of said substance.

2. A container according to Claim 1 which has a continuous base layer and an interrupted covering layer, which layers are combined in the display, said covering layer being readily removable from the base layer.

3. A container according to Claim 2 wherein the covering layer covers only local regions of the base layer and said regions are arranged in an array.

4. A container according to Claim 3 wherein said array represents the days of the week.

5. A container according to Claim 4 wherein said array includes, for each day of the week, a respective group of said regions and wherein there are the same number of regions in each group.

6. A container and display according to Claim 1 wherein the display incorporates a continuous

base layer and a covering layer which covers only local regions of the base layer, said regions being arranged in an array.

7. A label for a container according to Claim 1, the label comprising at least a continuous base layer and an interrupted covering layer which is readily removable from the base layer, wherein the covering layer covers only local regions of the base layer and said regions are arranged in an array.

8. A label according to Claim 7 wherein said array includes seven groups of said local regions, respective ones of the groups being marked to represent the days of the week.

9. A label according to Claim 8 wherein each of said group includes a plurality of said regions.

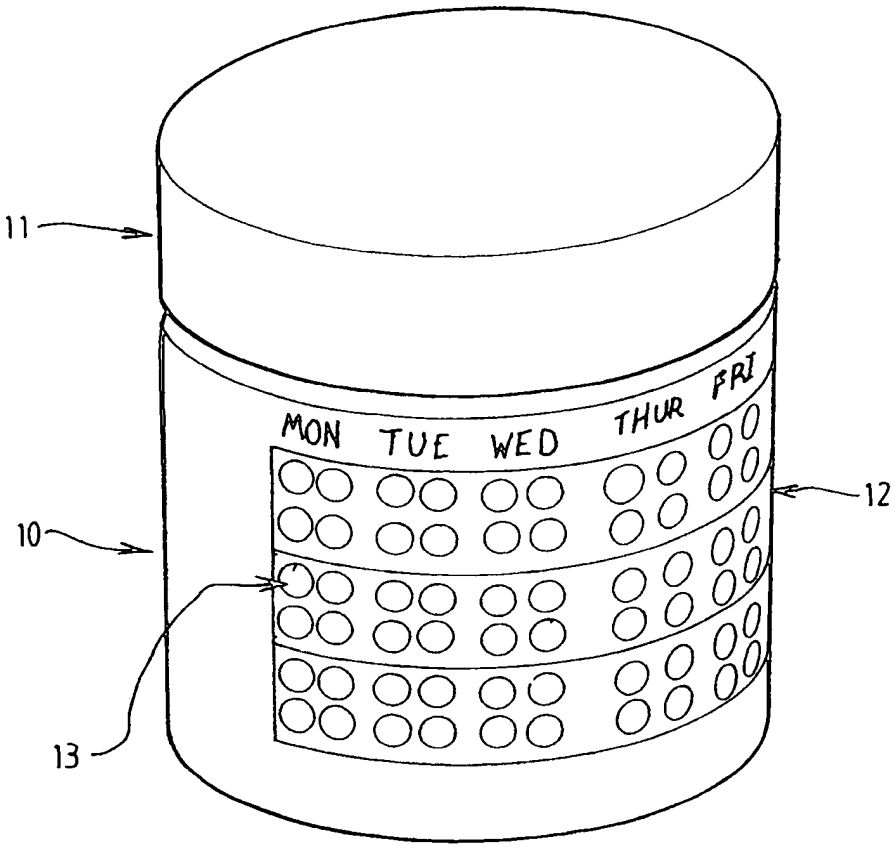
10. A container according to any one of Claims 2 to 5 wherein a sub-layer is interposed between the container and the base layer and wherein the sub-layer is larger than the base layer.

11. A container according to any one of Claims 2 to 6 or a label according to any one of Claims 7,8 and 9, wherein said regions of the base layer are coloured differently from the covering layer.

12. A container or a label according to Claim 11 wherein certain of said regions of the base layer have a first colour different from the colour of the covering layer and wherein further regions of the base layer have a second colour which is different from the colour of the covering layer.

13. A container or a label according to Claim 12 wherein said regions of the base layer include at least one region coloured green, at least one region coloured red and at least one region coloured orange or amber.

14. A method of recording the consumption of portions of a substance, which portions are initially present in a common container, wherein the container is provided with a base layer and an interrupted covering layer which is readily removable, one region at a time, from the base layer and wherein, when each portion is removed from the container for consumption, a respective region of the covering layer is removed from a corresponding region of the base layer, thereby changing the appearance of the container or the combination of base layer and covering layer.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